



March 15, 2006

Mr. Ron Sutton  
McCrone, Inc.  
111 South West Street, Ste. 6  
Dover, DE 19901

RE: PLUS review – PLUS 2006-02-12; Sussex West

Dear Mr. Sutton:

Thank you for meeting with State agency planners on February 22, 2006 to discuss the proposed plans for the Sussex West project to be located at the intersection of Minos Conaway Road and Route 9.

According to the information received, you are seeking site plan approval for 82 lots on 20.79 acres located in Investment Levels 2 & 3. ). The south 19.36 acres of it and the entire other parcel have already been developed with 108 leased lots and a set of amenities shared with the adjoining Sussex East community. Access would be by means of the existing entrance on Minos Conaway Road, which serves the existing development.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

## **Executive Summary**

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

## **State Strategies/Project Location**

This is located in Investment Levels 2 and 3 according to the *Strategies for State Policies and Spending* and in the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage growth that is sensitive to the natural resources on and surrounding the site. This is an expansion of an existing mobile home community.

## **Street Design and Transportation**

DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 50 feet from the centerline on principal arterial highways and 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site on each road.

It is recommended that sidewalks and bike paths be provided internal to the site. This is an "active adult" community and the internal paths should connect to the path required along the frontage.

## **Natural and Cultural Resources**

The DNREC Water Supply Section has determined that the parcel falls almost wholly within an excellent ground-water recharge area (see attached map). Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. As such, these soils are able to transmit water very quickly from the land surface to the water table. Consequently, ground water in these areas may very readily be adversely affected by land use activities or impervious cover.

The DNREC Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover.

The following are a complete list of comments received by State agencies:

**Office of State Planning Coordination – Contact: Dorothy Morris 739-3090**

This is located in Investment Levels 2 and 3 according to the *Strategies for State Policies and Spending* and in the Environmentally Sensitive Developing Area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage growth that is sensitive to the natural resources on and surrounding the site. This is an expansion of an existing manufactured housing community.

**Division of Historic and Cultural Affairs – Contact: Alice Guerrant 739-5685**

There is nothing known within this parcel. There is only a low potential for prehistoric- or historic-period archaeological sites here. However, the W. S. Wolfe House (S-867; Beers Atlas of 1868) is immediately to the east of this parcel on Seashore Highway. The S. A. Burton House (S-866; Beers Atlas of 1868) is immediately across Seashore Highway from the parcel.

Small, rural, family cemeteries often are found in relation to historic farm complexes, such as the Wolfe House, usually a good distance behind or to the side of the house. The developer should be aware of Delaware's Unmarked Human Remains Act of 1987, which governs the discovery and disposition of such remains. The unexpected discovery of unmarked human remains during construction can result in significant delays while the process is carried out. We will be happy to discuss these issues with the developer; the contact person for this program is Faye Stocum, 302-736-7400.

The south part of the parcel is already under development. It would be desirable to have some landscaping along the highway to buffer the view of this development from the Burton House. The Wolfe House appears to have a vegetative buffer already.

**Department of Transportation – Contact: Bill Brockenbrough 760-2109**

- 1) US Route 9 is classified as a principal arterial highway and Minos Conaway Road is classified as a local road. While arterial highways generally have wider rights of way, local roads in Delaware typically have right-of-way widths ranging from 33 to 50 feet. DelDOT's policy is to require dedication of sufficient land to provide a minimum right-of-way width of 50 feet from the centerline on principal

arterial highways and 30 feet from the centerline on local roads. Therefore DelDOT will require right-of-way dedication along the frontage to provide any additional width needed from this project.

- 2) DelDOT will also require that a paved multi-modal path, located in a 15-foot wide permanent easement, be provided across the frontage of the site on each road.
- 3) DelDOT does not have an active file concerning the existing entrance and therefore they cannot readily determine whether that entrance was designed to accommodate the vehicular trips associated with the phase of development currently proposed. As discussed below, they ask that the developer have their engineer contact us with any information they might have in that regard. If they cannot demonstrate the adequacy of the existing entrance to support the proposed development, then improvements will be necessary.
- 4) It is recommended that sidewalks and bike paths be provided internal to the site. This is an “active adult” community and the internal paths should connect to the path required along the frontage.
- 5) The developer’s site engineer should contact Mr. John Fiori, the Subdivision Manager for Sussex County, regarding the specific requirements for access. He may be reached at (302) 760-2260.

**The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-9071**

### **Soils**

According to the Sussex County soil survey, Greenwich and Downer were mapped on subject parcel. Greenwich and Downer are well-drained upland soils that, generally, have few limitations for development.

### **Impervious Cover**

Research has consistently shown that once a watershed exceeds a threshold of 10 percent imperviousness, water and habitat quality irreversibly decline. Based on analyses of 2002 aerial photography by the University of Delaware, the Broadkill River watershed, at that time, had about 7.9 percent impervious cover. Although this data is about 4 years old and likely an underestimate, it illustrates the importance of a proactive strategy to mitigate for predictable and cumulative environmental impacts. Since the amount of imperviousness generated by this project (reported as 45%, but likely to be higher) will

significantly exceed the desirable watershed threshold of 10 percent, the applicant is strongly advised to pursue best management practices (BMPs) that mitigate or reduce some of the most likely adverse impacts. Using pervious paving materials (“pervious pavers”) in lieu of asphalt or concrete in conjunction with additional tree plantings are examples of practical BMPs that could easily be implemented to reduce surface imperviousness.

The applicant should be made aware that all forms of constructed surface imperviousness (i.e., rooftops, sidewalks and roads) should be included in the impervious surface calculation – otherwise, an inaccurate assessment of this project’s actual environmental impacts will be made. It is strongly advised, therefore, that the applicant double-check their calculations to make sure that they are taking into account all of these considerations.

### **TMDLs**

A Total Maximum Daily Load (TMDL) is the maximum level of pollution for which a water quality limited waterbody can assimilate without compromising use and recreational goals such as swimming, fishing, drinking water, and shell fish harvesting. Compliance with TMDL nutrient loading reduction requirements will ultimately be assessed via nutrient budget protocol, a computer-based model that quantifies post-development nutrient loading under a variety of land use scenarios in combination with a variety (or absence) of BMP types and intensities. This post-development loading rate is then compared with the pre-development loading rate as a means to assess whether the project meets the acceptable TMDL reduction levels. Since impervious cover is an important variable for assessing the environmental impacts from nutrient runoff, the applicant - as mentioned previously - should attempt to recalculate it more comprehensively. All forms of created surface imperviousness (rooftops, sidewalks, and roads) should be considered when calculating surface imperviousness; otherwise, the nutrient budget protocol will not reflect the project’s true environmental impacts. Although TMDLs have not yet been finalized for the Broadkill River watershed to date, the applicant should be made aware that they will be available in the near future (before December 2006), and may be applicable to this project given the large backlog of developments pending County review. It is strongly advised, therefore, that the applicant be proactive and employ best management practices (BMPs) and Best Available Technologies (BATs) as methodological mitigative strategies to reduce the likely degradative impacts associated with this development. Examples of BMPs or BATs that should be used to significantly reduce nutrient loading from this project include practices that minimize or mitigate the impacts from created surface imperviousness and the implementation of innovative and more effective “green-technology” stormwater

methodologies instead of less effective or “outmoded” conventional open-water methodologies.

DNREC suggests that the applicant periodically contact their office regarding the status of the nutrient budget protocol and obtain it as soon as possible. When it becomes available, we suggest that the applicant then verify their project’s compliance with the specified TMDL loading rates by running the model themselves. The contact person for obtaining the protocol is Lyle Jones at 739-9939.

### **Water Supply**

The project information sheets state that water will be provided to the project by the Colonial East Existing Water System through a central community system. DNREC and PSC records indicate that the project is located within the public water service area granted to Tidewater Utilities under Certificate of Public Convenience and Necessity 83-W-15. I recommend that the developer contact Tidewater Utilities to determine the availability of public water. Information on CPCNs and the application process can be obtained by contacting the Public Service Commission at 302-739-4247. Should an on-site public well be needed, it must be located at least 150 feet from the outermost boundaries of the project. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-9944.

## **Water Resource Protection Areas**

The DNREC Water Supply Section has determined that the parcel falls almost wholly within an excellent ground-water recharge area (see attached map). Excellent Ground-Water Recharge Areas are those areas mapped by the Delaware Geological Survey where the first 20 feet of subsurface soils and geologic materials are exceptionally sandy. As such, these soils are able to transmit water very quickly from the land surface to the water table. Consequently, ground water in these areas may very readily be adversely affected by land use activities or impervious cover.

The DNREC Water Supply Section recommends that the portion of the new development within the excellent ground-water recharge area not exceed 20% impervious cover. Some allowance for augmenting ground-water recharge should be considered if the impervious cover exceeds 20% but is less than 50% of that portion of the parcel within this area. However, the development should not exceed 50% regardless. A water balance calculation will be necessary to determine the quantity of clean water to be recharged via a recharge basin. The purpose of an impervious cover threshold is to minimize loss of recharge (and associated increases in storm water) and protect the quality and quantity of ground water and surface water supplies.

The proposed development would change the impervious over from 0% to approximately 45%. These numbers were provided by developer on the PLUS application. Ideally, relocating any open space areas to the part of the parcel within the excellent ground-water recharge area would decrease the total impervious area. Augmenting the groundwater recharge with clean rooftop run-off systems are another alternative to maintaining the quality and quantity of water recharging the aquifer.

In addition, because the excellent ground water recharge area can so quickly affect the underlying aquifer if contaminants are spilled or discharged across the area, the storage of hazardous substances or wastes should not be allowed within the area unless specific approval is obtained from the relevant state, federal, or local program.

For more information refer to the Final Source Water Protection Guidance Manual for the Local Governments of Delaware

<http://www.wr.udel.edu/swaphome/phase2/SWPguidancemanual.html>

and

Ground-Water Recharge Design Methodology

[http://www.wr.udel.edu/swaphome/phase2/Publications/swapp\\_manual\\_final/swapp\\_guidance\\_manual\\_supp\\_1\\_2005\\_05\\_02.pdf](http://www.wr.udel.edu/swaphome/phase2/Publications/swapp_manual_final/swapp_guidance_manual_supp_1_2005_05_02.pdf).

For more information contact John Barndt at (302) 739-9945.

### **Sediment and Erosion Control/Stormwater Management**

The Sediment and Stormwater plan review and approval as well as construction inspection will be coordinated through Sussex Conservation District.

Green Technology BMPs must be given first consideration in stormwater quality management. Even if this portion of the site is discharging to an existing stormwater pond, Green Technology BMPs such as bioretention, biofiltration, and filtration must be investigated for quality treatment prior to discharging to the existing pond.

The existing pond to which the runoff from this site is being directed must be evaluated for its function prior to approval of additional drainage area being directed to it.

### **Nuisance Waterfowl**

There are five stormwater management ponds in the site plan, one of which is quite large. The applicant should consider a reduction in the number of ponds as they may attract waterfowl like resident Canada geese and mute swans, especially the large pond. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Short manicured grasses around ponds provide an attractive habitat for these species. DNREC recommends native plantings of tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area around the perimeter. Waterfowl do not feel safe when they can not see the surrounding area for possible predators. These plantings should be completed as soon as possible as it is easier to deter geese when there are only a few than it is to remove them once they become plentiful. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, property managers or owners will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number and size of the ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

### **Solid Waste**

Each Delaware household generates approximately 3,600 pounds of solid waste per year. On average, each new house constructed generates an additional 10,000 pounds of construction waste. Due to Delaware's present rate of growth and the impact that growth will have on the state's existing landfill capacity, the applicant is requested to be aware of the impact this project will have on the State's limited landfill resources and, to the extent



possible, take steps to minimize the amount of construction waste associated with this development.

### **Air Quality**

Once complete, vehicle emissions associated with this project are estimated to be 6.3 tons (12,586.1 pounds) per year of VOC (volatile organic compounds), 5.2 tons (10,420.5 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 3.8 tons (7,688.4 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.3 ton (684.4 pounds) per year of fine particulates and 526.4 tons (1,052,814.9 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 2.5 tons (5,076.6 pounds) per year of VOC (volatile organic compounds), 0.3 ton (558.6 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 0.2 ton (463.5 pounds) per year of SO<sub>2</sub> (sulfur dioxide), 0.3 ton (598.2 pounds) per year of fine particulates and 10.3 tons (20,579.3 pounds) per year of CO<sub>2</sub> (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 1.0 tons (2,012.0 pounds) per year of NO<sub>x</sub> (nitrogen oxides), 3.5 tons (6,998.2 pounds) per year of SO<sub>2</sub> (sulfur dioxide) and 516.1 tons (1,032,235.7 pounds) per year of CO<sub>2</sub> (carbon dioxide).

	VOC	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Mobile	6.3	5.2	3.8	0.3	526.4
Residential	2.5	0.3	0.2	0.3	10.3
Electrical Power		1.0	3.5		516.1
TOTAL	8.8	6.5	7.5	0.6	1052.8

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 1.0 tons of nitrogen oxides per year and 3.5 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage, <http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

building envelope upgrades,  
high performance windows,  
controlled air infiltration,  
upgraded heating and air conditioning systems,  
tight duct systems and  
upgraded water-heating equipment.”

The Energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. They highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

They also recommend that the home builders offer geothermal and photo voltaic energy options. Applicable vehicles should use retrofitted diesel engines during construction. The development should provide tie-ins to the nearest bike paths, links to mass transit, and fund a lawnmower exchange program for their new occupants.

**State Fire Marshal’s Office – Contact: Duane Fox 856-5298**

At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation:

- a. **Fire Protection Water Requirements:**
  - In the event a central water system is to be provided, separation between structures shall be in accordance with NFPA 501-A. Water flow requirements shall be in accordance with the Delaware State Fire Prevention Regulations.
  - Where a water distribution system is proposed for single-family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required.

- ❖ *There may be a requirement to provide fire protection (hydrants) in the existing subdivision. Contact Duane Fox, Jr. at 302-856-5298 to discuss. This was discussed briefly at the PLUS meeting.*

**b. Accessibility:**

- All premises, which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Minos Conoway Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.
- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

**c. Gas Piping and System Information**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

**d. Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: [www.delawarestatefiremarshal.com](http://www.delawarestatefiremarshal.com), technical services link, plan review, applications or brochures.

**Department of Agriculture - Contact: Milton Melendez 698-4500**

The Delaware Department of Agriculture has no objections to the Sussex West application. The site is located on an environmentally sensitive development area. The *Strategies for State Policies and Spending* encourages environmentally responsible development in Investment Level 3 areas. This site is part of an “excellent recharge” area. DNREC has mapped all ground water potential recharge areas. An “excellent recharge” rating is the highest rating and designates an area as having important groundwater recharge qualities. Maintaining pervious cover in “Excellent” and “Good” recharge areas is crucial for the overall environmental health of our state and extremely important to efforts which ensure a safe drinking water supply for future generations. Retention of pervious cover to ensure an adequate future water supply is also important for the future viability of agriculture in the First State. The loss of every acre of land designated as “excellent” and “good” recharge areas adversely impacts the future prospects for agriculture in Delaware.

*Right Tree for the Right Place*

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

*Native Landscapes*

The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and will clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

**Public Service Commission - Contact: Andrea Maucher 739-4247**

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

**Delaware State Housing Authority – Contact Jimmy Atkins 739-4263**

This proposal is to add a new phase to the existing Sussex West manufactured home community, west of Five Points near Lewes that will add 82 residential lots on 20.8 acres. The DSHA supports this proposal because manufactured housing is an affordable option for low- and moderate-income persons and there are few housing options available in the Lewes area. While it is unclear what income level this community will be marketed toward, it would be beneficial if some units were set aside for low- and moderate-income persons

**Sussex County – Contact: Richard Kautz 855-7878**

Because this project is situated in an Environmentally Sensitive Development Area, the required report should include how the PLUS comments have been addressed and how the plan has been revised accordingly.

The Sussex County Engineer Comments:

**The project proposes to add an additional 82 units to part a parcel with 108 previously approved lots. The proposed project is within the West Rehoboth Expansion Area for central sewer and connection to the sewer system is mandatory.**

The project is within planning study and system design assumptions for sewer service. However, downstream Pump Station Number 207 requires immediate upgrades. Sussex County is currently considering proposals from developers of other area projects to complete said upgrades. A schedule for completion of the upgrades is unknown at this time. A sewer connection will not be approved at this time, unless Colonial East, Ltd. undertakes or others complete the upgrades.

In addition, the proposed development will require a developer installed collection system in accordance with Sussex County's standard requirements and procedures. The connection point must be approved by the Sussex County Engineer. A sewer concept plan must be submitted for review and approval prior to construction plan approval. A checklist for preparing sewer concept plans was handed out at the meeting.

Onetime System Connection Charges will apply. Please contact Mrs. Christine Fletcher at 302 854-5086 for additional information on charges. Payment of System Connection is required prior to issuance of a building permit. Sewer hookup permits will not be issued until any necessary offsite upgrades have been completed and the Sussex County Council has approved Beneficial Occupancy of the collection system.

**Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.**

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in cursive script that reads "Constance C. Holland".

Constance C. Holland, AICP  
Director

CC: Sussex County